

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/DK2004/000527

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07K19/00 C07K14/705 C07K14/78 C07K14/52 C12N9/64  
A61K38/17 A61K38/43 A61K38/19 A61K38/39

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07K A61K C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, CHEM ABS Data, Sequence Search, WPI Data, PAJ, BIOSIS

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 03/016351 A (ENKAM PHARMACEUTICALS A/S; KISELYOV, VLADISLAV, V; SKLADCHIKOVA, GALIN) 27 February 2003 (2003-02-27) cited in the application the entire document, particularly pages 13-22; page 25, lines 6-26; the claims -----	1-34
Y	WO 01/16166 A (THE UNITED STATES OF AMERICA, REPRESENTED BY THE SECRETARY, DEPARTMENT) 8 March 2001 (2001-03-08) pages 2, 13 and 51 (peptide E20); -----	1-34
Y	WO 00/18791 A (STATENS SERUM INSTITUT; HOLM, ARNE; JOERGENSEN, RIKKE, MALENE; OESTERG) 6 April 2000 (2000-04-06) cited in the application page 15, line 8 - page 17, line 20 page 34, line 21 - page 36, line 30 ----- -/--	1-34

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

3 May 2005

Date of mailing of the international search report

10. 06. 2005

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>STAHLHUT M ET AL: "NCAM-FIBRONECTIN-TYPE-III-DOMAIN SUBSTRATA WITH AND WITHOUT A SIX-AMINO-ACID-LONG PROLINE-RICH INSERT INCREASE THE DENDRITIC AND AXONAL ARBORIZATION OF SPINAL MOTONEURONS" JOURNAL OF NEUROSCIENCE RESEARCH, WILEY-LISS, US, vol. 48, 1997, pages 112-121, XP009024260 ISSN: 0360-4012 the whole document</p> <p>-----</p>	
A	<p>KISELYOV VV ET AL.: "Structural Basis for a Direct Interaction between FGFR1 and NCAM and Evidence for a Regulatory Role of ATP" STRUCTURE, vol. 11, June 2003 (2003-06), pages 691-701, XP002319882 cited in the application abstract; figures 6,7</p> <p>-----</p>	
P,X	<p>WO 2004/056865 A (ENKAM PHARMACEUTICALS A/S; BEREZIN, VLADIMIR; ALBRECHTSEN, MORTEN; BOC) 8 July 2004 (2004-07-08) the whole document</p> <p>-----</p>	1-34

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## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 1-34 (all partially)  
because they relate to subject matter not required to be searched by this Authority, namely:  
Although claim 34 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☒ Claims Nos.: 1-34 (all partially)  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☒ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:  
12,14,17-19 (completely) and 1-11,13,15,16,20-34 (partially)
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- ☒ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

## Continuation of Box II.1

Although claim 34 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

## Continuation of Box II.2

Claims Nos.: 1-34 (all partially)

Present claims 1-10 and 20-34 relate to an extremely large number of possible compounds.

Support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT is to be found, however, for only a very small proportion of the compounds claimed. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible.

Furthermore, it is unclear in the sense of Article 6 PCT what is meant with a sequence of formula L1-A-L2-B-L3-C-L4-D-L5 as defined in claim 1. This expression comprises a wide range of compounds and is therefore speculative, embracing a great variety of possibilities not yet explored by the applicant, the effect of which cannot be expected by the skilled person using the teaching disclosed in the current application and his technical knowledge to reproduce without undue burden all the possibilities which are actually claimed, contrary to Article 5 PCT.

Moreover, the scope of claims 3 and 5-34, in as far as the expressions "(functional) homologues", "fragments", or "variants" are concerned, is so unclear (Article 6 PCT) that a meaningful international search is impossible with regard to these expressions.

Consequently, the search has been carried out for those parts of the claims which appear to be supported and disclosed, and which belong to the first invention, namely those parts relating to the compounds, wherein at least one of the two peptide sequences is a peptide fragment having the amino acid sequence of SEQ ID NO: 1.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

Invention 1: claims 12,17,19 (completely) and 1-11,13,15,16,20-34 (partially)

compound wherein at the least one of the two peptide sequences is a peptide fragment having the amino acid sequence selected from SEQ ID NO: 1, and its use and method

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Invention 2: 14,18 (completely) and 1-11,13,15,16,20-34 (partially)

compound wherein at the least one of the two peptide sequences is a peptide fragment having the amino acid sequence selected from SEQ ID NO: 2, and its use and method

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Inventions 3-146: 1-11,13,15,16,20-34 (all partially)

compound wherein at the least one of the two peptide sequences is a peptide fragment having the amino acid sequence selected from SEQ ID NOs: 3-146, and its use and method

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No  
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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 03016351	A	27-02-2003	CA 2457164 A1	27-02-2003
			WO 03016351 A2	27-02-2003
			EP 1434798 A2	07-07-2004
			US 2004242479 A1	02-12-2004
WO 0116166	A	08-03-2001	AU 7078200 A	26-03-2001
			WO 0116166 A2	08-03-2001
			US 2004092720 A1	13-05-2004
			US 6664374 B1	16-12-2003
WO 0018791	A	06-04-2000	AT 254137 T	15-11-2003
			AU 6078399 A	17-04-2000
			DE 69912827 D1	18-12-2003
			DE 69912827 T2	21-10-2004
			WO 0018791 A1	06-04-2000
			EP 1117677 A1	25-07-2001
			US 2004086949 A1	06-05-2004
WO 2004056865	A	08-07-2004	AU 2003287918 A1	14-07-2004
			WO 2004056865 A2	08-07-2004